



State of Utah

Department of
Environmental Quality

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Executive Director

DIVISION OF AIR QUALITY

Cheryl Heying
Director

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GARY HERBERT
Lieutenant Governor

DAQE-IN0101300016-08

July 18, 2008

John Buist
Spectrum Press
1370 West 500 South
Bountiful, Utah 84010

Dear Mr. Buist:

Re: Intent to Approve: Modify AO DAQE-128-02 to Replace and Add Equipment
Davis County – CDS B; MAINT; HAPs
Project Code: N010130-0016

The attached document is the Intent to Approve for the above-referenced project. The Intent to Approve is subject to public review. Any comments received shall be considered before an Approval Order is issued.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any questions you may have on this project to Mr. Nando Meli. He may be reached at (801) 536-4052.

Sincerely,

John T. Blanchard, Manager
Minor New Source Review Section

JTB:NM:sa

cc: Davis County Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**INTENT TO APPROVE: Modify AO DAQE-128-02
to Replace and Add Equipment**

**Prepared By: Nando Meli, Engineer
(801) 536-4052
Email: nmeli@utah.gov**

INTENT TO APPROVE NUMBER

DAQE-IN0101300016-08

Date: July 18, 2008

**Spectrum Press
Source Contact
John Buist
(801) 292-1088**

**M. Cheryl Heying
Executive Secretary
Utah Air Quality Board**

Abstract

Spectrum Press, formerly known as Clipper Publishing, operates a printing plant in Bountiful, Utah. They have requested a modification to the equipment listed in their Approval Order DAQE-128-02. Currently they are approved to have two coldset presses, two heatset presses and a catalytic fume incinerator. They have replaced the four presses with two heatset presses and one coldset press. The incinerator has been replaced with a catalytic oxidizer. The incinerator only controlled VOC emissions from one of the heatset presses. The oxidizer will control the VOC emissions from both replacement heatset presses. In September 2007 Spectrum Press obtained a replacement in kind letter from the Division of Air Quality to replace one of the eight unit heatset press with a different eight unit heatset press. In January 2008, Spectrum Press replaced the catalytic fume incinerator without approval with a catalytic oxidizer.

The printing plant is located in Davis County and it is a maintenance area for ozone. New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), Maximum Available Control Technology (MACT) regulations and Title V of the 1990 Clean Air Act do not apply to this source. The emissions, in tons per year, will change as follows: $PM_{10} + 0.08$, $NO_x + 1.16$, $SO_2 + 0.01$, $CO + 0.98$, and $VOC - 0.85$. The changes in emissions will result in the following, in tons per year, potential to emit totals: $PM_{10} = 0.34$, $NO_x = 4.50$, $SO_2 = 0.03$, $CO = 3.78$, $VOC = 21.15$, and $HAPs = 2.00$.

The Notice of Intent (NOI) for the above-referenced project has been evaluated and has been found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an Approval Order by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notice of intent to approve will be published in the Davis County Clipper on July 22, 2008. During the public comment period the proposal and the evaluation of its impact on air quality will be available for the public to review and comment. If anyone so requests a public hearing, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and/or the hearing will be evaluated.

Please review the proposed Approval Order conditions during this period and make any comments you may have. The proposed conditions of the Approval Order may be changed as a result of the comments received. Unless changed, the Approval Order will be based upon the following conditions:

General Conditions:

1. This Approval Order applies to the following company:

Site Office
Spectrum Press
1370 S. 500 W.
Bountiful, Utah 84010

Phone Number	(801) 292-1088
Fax Number	(801) 295-3044

The equipment listed in this Approval Order shall be operated at the following location:

1370 S. 500 W. Bountiful, Davis County Utah

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27
4,525.0 meters Northing, 428.1 kilometers Easting; Zone 12

2. All definitions, terms, abbreviations, and references used in this Approval Order (AO) conform to those used in the UAC R307 and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.
3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.
4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401.
5. All records referenced in this AO, which are required to be kept by Spectrum Press, shall be made available to the Executive Secretary or Executive Secretary's representative upon request. Records shall be kept for the following minimum periods:
 - A. Emission inventories Five years from the due date of each emission statement or until the next inventory is due, whichever is longer
 - B. All other records Two years
6. Spectrum Press shall install and operate the heatset presses, coldset press and catalytic oxidizer, and shall conduct its operations of the printing plant in accordance with the terms and conditions of this AO, which was written pursuant to Spectrum's NOI submitted to the Division of Air Quality (DAQ) on September 12, 2007, and additional information submitted to the DAQ on February 12, 2008, March 28, 2008, March 31, 2008, April 8, 2008, April 21, 2008, May 2, 2008, June 4, 2008, June 9, 2008, June 10, 2008, and June 11, 2008.
7. This AO shall replace the AO (DAQE-128-02) dated February 21, 2002.
8. The approved installations shall consist of the following equipment or equivalent*:
 - A. One Heatset Press

Manufacturer:	Harris
Model Number:	M300
Maximum Printing Capacity	8 printing units
Maximum Oven Heat Input	9.2 x 10 ⁶ BTU/hr (MMBTU/hr)
Oven Fuel Type	Natural gas

- | | | |
|----|-------------------------------------|---|
| B. | Heatset Press | |
| | Manufacturer: | Hantscho |
| | Model Number: | Mark V |
| | Maximum Printing Capacity | 8 printing units |
| | Maximum Oven Heat Input | 3.6 MMBTU/hr |
| | Oven Fuel Type | Natural gas |
| | | |
| C. | Catalytic Oxidizer | |
| | Manufacturer | MegTec |
| | Model Number | Quantum 6000 |
| | Capacity | 3.25 MMBTU/hr |
| | Air Flow Design Rate | 6,000 Standard Cubic Feet/Minute (SCFM) |
| | Fuel Type | Natural gas |
| | Temperature Recorder for Oxidizer | |
| | Manufacturer | Monarch |
| | Model | DataChart 1250 |
| | Type | 2 Channel Paperless Recorder |
| | | |
| D. | Coldset Press | |
| | Manufacturer: | Harris |
| | Model Number: | V15D |
| | Maximum Printing Capacity | 14 printing units |
| | | |
| E. | Miscellaneous Natural Gas Heaters** | |
| | Total Capacity | 0.9 MMBTU/hr |
| | Fuel Type | Natural gas |

* Equivalency shall be determined by the Executive Secretary. The equipment nameplate shall be located such that an inspector can at any time safely read the information.

** This equipment is listed for informational purposes only.

9. The catalytic oxidizer shall control process streams from all heatset presses. This catalytic oxidizer shall be sized to handle at least 6,000 SCFM for the existing conditions. All exhaust air from the heatset presses shall be routed through the catalytic oxidizer before being vented to the atmosphere.
10. Spectrum Press shall notify the Executive Secretary in writing when the installation of the equipment listed in Condition #8 has been completed and is operational. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If the installation has not been completed within 18 months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the installation. At that time, the Executive Secretary shall require documentation of the continuous installation of the operation and may revoke the AO in accordance with R307-401-18.

Limitations and Tests Procedures

11. Emissions to the atmosphere at all times from the indicated emission point shall not exceed the following rates and concentrations:

Source: Catalytic Oxidizer

<u>Pollutant</u>	<u>lb/hr</u>
VOC	1.55

12. Stack testing to show compliance with the emission limitation stated in the above condition shall be performed as specified below:

A.	<u>Emissions Point</u>	<u>Pollutant</u>	<u>Testing Status</u>	<u>Test Frequency</u>
	Catalytic Oxidizer	VOC	*	@

B. Testing Status

* Initial compliance testing is required. The initial test date shall be performed as soon as possible and in no case later than 180 days after the granting of an AO to an existing emission source that has not had an initial compliance test performed. If an existing source is modified, a compliance test is required on the modified emission point that has an emission rate limit.

@ Test every five years. The Executive Secretary may require testing at any time.

C. Notification

The Executive Secretary shall be notified at least 30 days prior to conducting any required emission testing. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Executive Secretary.

The source test protocol shall be approved by the Executive Secretary prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested, and binder sampling procedures to be used. A pretest conference shall be held, if directed by the Executive Secretary.

D. Sample Location

The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other methods as approved by the Executive Secretary. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

E. Volumetric Flow Rate

40 CFR 60, Appendix A, Method 2 or other testing methods approved by the Executive Secretary.

F. Volatile Organic Compounds (VOCs)

40 CFR 60, Appendix A, Method 25, 25A, or, other testing methods approved by the Executive Secretary.

G. Calculations

To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary, to give the results in the specified units of the emission limitation.

H. New Source Operation

For a new source/emission point, the production rate during all compliance testing shall be no less than 90% of the production rate listed in this AO. If the maximum AO allowable production rate has not been achieved at the time of the test, the following procedure shall be followed:

- 1) Testing shall be at no less than 90% of the production rate achieved to date.
- 2) If the test is passed, the new maximum allowable production rate shall be 110% of the tested achieved rate, but not more than the maximum allowable production rate. This new allowable maximum production rate shall remain in effect until successfully tested at a higher rate.
- 3) The owner/operator shall request a higher production rate when necessary. Testing at no less than 90% of the higher rate shall be conducted. A new maximum production rate (110% of the new rate) will then be allowed if the test is successful. This process may be repeated until the maximum AO production rate is achieved.

I. Existing Source Operation

For an existing source/emission point, the production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

13. Visible emissions from any stationary point or fugitive emission source associated with the source or with the control facilities shall not exceed 10% opacity. Opacity observations of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9.

14. The following hours of operation shall not be exceeded:
 - A. 4,420 hours of operation per rolling 12-month period on the Hantscho Mark V heatset press
 - B. 4,420 hours of operation per rolling 12-month period on the Harris M300 heatset press
 - C. 6,000 hours of operation on the catalytic oxidizer per rolling 12-month period

To determine compliance with a rolling 12-month total, Spectrum Press shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of hours of operation shall be kept for all periods when the plant is in operation. Hours of operation shall be kept on a daily basis. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log.

Fuels

15. Spectrum Press shall only use natural gas as a fuel in the heatset presses and the catalytic oxidizer.

Volatile Organic Compound (VOC) and Hazardous Air Pollutants (HAPs) Limitations

16. The plant-wide non-combustion emissions of VOCs and HAPs from the oxidizer, printing presses and associated operations shall not exceed:

20.90 tons per rolling 12-month period for VOCs

0.236 tons per rolling 12-month period for Cumene

1.254 tons per rolling 12-month period for Ethylene Glycol

0.310 tons per rolling 12-month period for Xylene

Compliance with each limitation shall be determined on a rolling 12-month total. Based on the last day of each month, a new 12-month total shall be calculated using data from the previous 12 months. Monthly calculations shall be made no later than 20 days after the end of each calendar month.

The VOC and HAP emissions shall be determined by maintaining a record of VOC and HAP emitting materials used each month. The record shall include the following data for each material used:

- A. Name of the VOC and HAPs emitting material, such as: paint, adhesive, solvent, thinner, reducers, chemical compounds, toxics, isocyanates, etc.
- B. Density of each material used (pounds per gallon)
- C. Percent by weight of all VOC and HAP in each material used
- D. Gallons of each VOC and HAP emitting material used

- E. The amount of VOC and HAP emitted monthly by each material used shall be calculated by the following procedure:

$$\text{VOC} = \frac{\% \text{ VOC by Weight}}{(100)} \times \frac{[\text{Density } (\text{lb})]}{(\text{gal})} \times \text{Gal Consumed} \times \frac{1 \text{ ton}}{2000 \text{ lb}}$$

$$\text{HAP} = \frac{\% \text{ HAP by Weight}}{(100)} \times \frac{[\text{Density } (\text{lb})]}{(\text{gal})} \times \text{Gal Consumed} \times \frac{1 \text{ ton}}{2000 \text{ lb}}$$

- F. The amount of VOC or HAP emitted monthly from all materials used
- G. The amount of VOCs or HAPs reclaimed for the month shall be similarly quantified and subtracted from the quantities calculated above to provide the monthly total VOC or HAP emissions.

Monitoring - General Process

17. Spectrum Press shall continuously monitor the temperature across the catalytic oxidizer to ensure that it is working properly. The catalyst bed shall be preheated to a minimum temperature not less than 550° F before printing operations are started, and the temperature shall be maintained at or above this temperature during all printing operations. The maximum exhaust temperature shall not be more than 600°F. The temperatures shall be continuously recorded by an electronic recorder at a minimum of every ten seconds.

The temperature shall be monitored by two thermocouples. One shall be located on the catalyst bed where the gas passes across the catalyst bed. The other shall be located downstream from where the gas exits the oxidizer. Both shall be located such that an inspector can at any time safely read the output. The dryer gas stream shall be heated to the bed temperature even if no VOCs are present.

The thermocouples shall be pre-calibrated by the manufacturer before they are installed. The reading shall be accurate to within plus or minus 15°. The thermocouples shall be calibrated according to the manufacturer's instructions but not less than once every five years.

Records & Miscellaneous

18. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on the information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on the equipment authorized by this AO shall be recorded.
19. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.

20. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the DAQ. The UAC R307 rules used by DAQ, the NOI guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

<http://www.airquality.utah.gov/>

The annual emissions estimations below include point source and fugitive emissions, and do not include fugitive dust, road dust, tail pipe emissions, and grandfathered emissions. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, Maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Potential To Emit (PTE) emissions for Spectrum Press are currently calculated at the following values:

	<u>Pollutant</u>	<u>Tons/yr</u>
A.	PM ₁₀	0.34
B.	SO ₂	0.03
C.	NO _x	4.50
D.	CO	3.78
E.	VOC	21.15
F.	HAPs	
	Cumene	0.236
	Ethylene Glycol	1.254
	Xylene.....	0.310
	HAPs from natural gas combustion...	0.200
	Total HAPs	2.00

The DAQ is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final AO.

Sincerely,

John T. Blanchard, Manager
Minor New Source Review Section